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IDAHO PUBLIC UTILITIES COMMISSION

June 30, 2015

#### **VIA HAND DELIVERY**

Jean D. Jewell, Secretary Idaho Public Utilities Commission 472 West Washington Street Boise, Idaho 83702

Re:

Case No. IPC-E-15-19

2015 Integrated Resource Plan – Idaho Power Company's Application

Dear Ms. Jewell:

Enclosed for filing in the above matter please find an original and seven (7) copies of Idaho Power Company's Application.

Very truly yours,

Lisa D. Nordstrom

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Attorney for Idaho Power Company

2015 JUN 30 AM In: n4 IDARO PUBLIC UTILITIES COMMISSION

#### BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER	)	
COMPANY'S 2015 INTEGRATED	)	CASE NO. IPC-E-15-19
RESOURCE PLAN.	)	
	)	APPLICATION
	)	

COMES NOW Idaho Power Company ("Idaho Power" or "Company"), and in accordance with Idaho Public Utilities Commission ("IPUC" or "Commission") Order No. 22299, hereby requests that the Commission accept for filing the Company's 2015 Integrated Resource Plan ("IRP"). In support of this request, Idaho Power states as follows:

#### I. BACKGROUND

1. As required by Commission Order No. 22299 and the Public Utility Commission of Oregon's ("OPUC") Order Nos. 89-507, 07-002, 07-042, and 12-013, the Company prepares and files a biennial IRP with both the IPUC and the OPUC setting forth how Idaho Power intends to serve the electric requirements of its customers. Idaho Power's 2015 IRP addresses available supply-side and demand-side resource options, planning period load forecasts, potential resource portfolios, a risk analysis, and an action plan that details the steps the Company plans to take to implement the 2015 IRP.

- 2. The complete 2015 IRP consists of four separate documents: (1) the 2015 Integrated Resource Plan; (2) Appendix A—Sales and Load Forecast; (3) Appendix B—Demand-Side Management 2014 Annual Report; and (4) Appendix C—Technical Appendix. A copy of the complete 2015 IRP is provided as Attachment 1 and can also be found on the Company's website at <a href="https://www.idahopower.com">www.idahopower.com</a>. Interested persons may also request a printed copy of the 2015 IRP by contacting irp@idahopower.com.
- 3. Idaho Power has worked with stakeholders over the last year to develop the 2015 IRP. To incorporate stakeholder and public input, the Company worked with the Integrated Resource Plan Advisory Council ("IRPAC"), comprised of members of the environmental community, major industrial customers, agricultural interests, representatives of the OPUC and IPUC staffs, representatives from the Idaho Office of Energy Resources and the Northwest Power and Conservation Council, and others. A list of the 2015 IRPAC members can be found in Appendix C—Technical Appendix. For the 2015 IRP, Idaho Power conducted 12 IRPAC meetings, including a resource portfolio design workshop. Public working group meetings to address the specific topics of energy efficiency, solar resources, and the study of coal resources were also held.
- 4. Following the filing of the 2015 IRP, Idaho Power will present the resource plan at public meetings in various communities around the Company's service area. In

addition, Idaho Power employees will present the plan and discuss the planning process with various civic groups and at educational seminars, as requested.

#### II. IRP GOALS AND ASSUMPTIONS

- 5. The primary goals of Idaho Power's 2015 IRP are to: (1) identify sufficient resources to reliably serve the growing demand for energy within Idaho Power's service area throughout the 20-year planning period; (2) ensure the selected resource portfolio balances cost, risk, and environmental concerns; (3) give equal and balanced treatment to both supply-side resources and demand-side measures; and (4) involve the public in the planning process in a meaningful way.
- 6. The 2015 IRP assumes that during the 20-year planning period in the IRP (2015-2034), Idaho Power will continue to be responsible for acquiring resources sufficient to serve all of its retail customers in its Idaho and Oregon service territories and will continue to operate as a vertically-integrated electric utility. During this period, load is forecasted to grow by 1.2 percent per year for average energy demand and 1.5 percent per year for peak-hour demand. The total number of customers is expected to increase to 711,000 by 2034 from 515,000 in 2014. Idaho Power continues to use 70<sup>th</sup> percentile water conditions and 70<sup>th</sup> percentile average load for energy planning. For peak-hour capacity planning, Idaho Power uses 90<sup>th</sup> percentile water conditions and 95<sup>th</sup> percentile peak-hour load. In combination with demand-side measures, additional Company-owned resources will be needed to meet these increased demands.

#### III. IRP METHODOLOGY

7. Preparation of Idaho Power's 2015 IRP began with the forecast of future customer demand. Existing generation resources, demand-side resources, and transmission import capacity were combined with customer demand to create a load

and resource balance for energy and capacity. The Company then evaluated new energy efficiency programs and the expansion of existing programs to revise energy and capacity deficits. Finally, Idaho Power designed and analyzed supply-side and transmission resource portfolios to address the remaining energy and capacity deficits. The Company evaluates resources and resource portfolios using a financial analysis.

- 8. Idaho Power evaluates the costs and benefits of each resource type. The financial costs include construction, fuel, operation and maintenance, transmission upgrades, and anticipated environmental controls, and emission costs. The financial benefits include economic resource operations, projected market sales, and the market value of renewable energy certificates.
- 9. Idaho Power is part of the larger northwestern and western regional energy markets, and market prices are an important component of evaluating energy purchases and sales. Idaho Power faces transmission import constraints and, at times of peak customer load, must rely on its own generation resources regardless of regional market prices. Likewise, there are times when the generation connected to the Idaho Power system exceeds customer demand and the transmission export capacity, and the Company must curtail generation on its system.
- 10. An additional transmission connection to the Pacific Northwest has been part of the Idaho Power preferred resource portfolio since the 2006 IRP. By the 2009 IRP, Idaho Power determined the approximate configuration and capacity of the transmission line now known as the Boardman to Hemingway ("B2H") transmission line project. Idaho Power again evaluated the B2H transmission line in the 2015 resource plan to ensure the transmission addition remains a prudent resource acquisition.

#### IV. PREFERRED PORTFOLIO (2015-2034)

- 11. A fundamental goal of the IRP process is to identify a selected, or preferred, resource portfolio. The preferred portfolio identifies resource options and timing to allow Idaho Power to continue to reliably serve customer demand, balancing cost, risk, and environmental factors over the 2015 to 2034 planning period. The 2015 IRP presented by this Application provides the Company's estimate of future loads and sets forth how the Company intends to serve the electrical requirements of its native load customers over the next 20 years. While the proposed preferred resource portfolio represents current resource acquisition targets, it is important to note that the actual resource portfolio may differ from the quantities and types of resources outlined in the IRP depending on the changing needs of Idaho Power and its customers.
- 12. Analyses conducted for the 2015 IRP consistently indicate favorable economics associated with two significant resource actions: the B2H transmission line and the early retirement of the North Valmy power plant. The IRP analyses suggest a strong connection between these resource actions, both of which are characterized by uncertain timetables. Specifically, acceleration in the completion of the B2H line can be expected to provide the system reliability and access to markets, allowing for a corresponding acceleration in the early retirement of North Valmy.
- 13. The B2H transmission line and early North Valmy retirement are two key resource actions contained in portfolio P6(b), the 2015 IRP's preferred resource portfolio. 2015 IRP at 141-143. Portfolio P6(b) contains both actions in the year 2025, with the completion of the transmission line preceding the end-of-year coal plant retirement. Portfolio P6(b) contains no other resource actions through the end of the 2020s, adding 60 megawatts ("MW") of demand response and 20 MW of ice-based

thermal energy storage in 2030 and a 300 MW combined cycle combustion turbine in 2031.

- 14. The absence of resource needs in portfolio P6(b) prior to the 2025 retirement of North Valmy is noteworthy. The resource sufficiency through the early 2020s shields portfolio P6(b) from risk exposure associated with the following factors:
  - Uncertainty related to planned but yet-to-be-built solar under the Public Utility Regulatory Policies Act of 1978; further project cancellations beyond those already observed will have a greater impact on portfolios, requiring capacity additions in the early 2020s.
  - Uncertainty related to the Environmental Protection Agency's ("EPA") proposed regulation of CO<sub>2</sub> emissions from existing power plants under Clean Air Act ("CAA") Section 111(d), particularly the effect of the final regulation on operations at coal and natural gasfired power plants in the proposed interim compliance period beginning in 2020.
  - Uncertainty related to the completion date of the B2H line due to permitting issues and needs of project partners.
  - Uncertainty related to retirement planning for the jointly-owned North Valmy power plant, specifically the challenges associated with arriving at a mutually feasible retirement date.
- 15. Uncertainty is a common part of long-term integrated resource planning. Even with the increased uncertainty surrounding the 2015 IRP, the analysis indicates completion of the B2H transmission line and early retirement of the North Valmy power plant are prudent actions. The timing of the actions can be appropriately adjusted as conditions related to the four factors listed above become actionable.

#### V. <u>ACTION PLAN (2015-2018)</u>

16. The action plan for the 2015 to 2018 period includes items specifically related to the preferred portfolio P6(b) and other items irrespective of the portfolio selected. The P6(b) action items include continued permitting and planning for the B2H

transmission line and investigation of North Valmy retirement in collaboration with plant co-owner NV Energy. The pursuit of these items over the action plan period is critical to the successful and timely implementation of the preferred portfolio.

- 17. The Gateway West transmission line remains a key future resource to Idaho Power and the region, promoting continued grid reliability in a time of expanding variable energy resources. Therefore, the plan includes continued permitting and planning associated with the Gateway West project.
- 18. CAA Section 111(d) will potentially have a pronounced impact on coal and natural gas-fired power plant operations on Idaho Power's system and throughout the nation. Idaho Power will remain involved as a stakeholder as CAA Section 111(d) moves toward finalization and implementation. As stipulations of the final regulation become clearer, and as implementation planning is developed, Idaho Power will assess the impacts of CAA Section 111(d) on the preferred portfolio.
- 19. In addition to continued transmission permitting efforts and evaluation of potential changes in thermal fleet operations, the action plan also includes the following items:
  - Continued pursuit of cost-effective energy efficiency, working with stakeholder groups, such as the Energy Efficiency Advisory Group ("EEAG") and regional groups such as the Northwest Energy Efficiency Alliance.
  - Filing to amend the Federal Energy Regulatory Commission ("FERC") license to adjust the 50 MW Shoshone Falls project expansion and efforts related to the study and construction of a smaller project upgrade with a scheduled on-line date in the first quarter of 2019.
  - Completion of selective catalytic reduction ("SCR") retrofits for Jim Bridger Units 3 and 4.

 Begin economic evaluation of SCR retrofits for Jim Bridger Units 1 and 2 (SCR installation required for Unit 1 in 2022 and for Unit 2 in 2021).

Table 10.1 on pages 142-143 provides actions with dates for the 2015 to 2018 period.

Table 10.1 Action plan (2015–2018)

Year	Resource	Action	Action Number
2015–2018	B2H	Ongoing permitting, planning studies, and regulatory filings	1
2015–2018	Gateway West	Ongoing permitting, planning studies, and regulatory filings	2
2015–2019	Energy efficiency	Continue the pursuit of cost-effective energy efficiency. The forecast reduction for 2015–2019 programs is 84 average megawatts (aMW) for energy demand and 126 MW for peak demand.	3
2015–2016	N/A	Coordinate with government agencies on implementation planning for CAA Section 111(d).	4
2015	Shoshone Falls	File to amend FERC license regarding 50-MW expansion	5
2015	Jim Bridger Unit 3	Complete installation of SCR emission-control technology	6
2015-2016	Shoshone Falls	Study options for smaller upgrade ranging in size up to approximately 4 MW	7
2016	Jim Bridger Unit 4	Complete installation of SCR emission-control technology	8
2016	North Valmy units 1 and 2	Continue to work with NV Energy to synchronize depreciation dates and determine if a date can be established to cease coal-fired operations	9
2017	Shoshone Falls	Commence construction of a smaller upgrade	10
2017	Jim Bridger units 1 and 2	Evaluate the installation of SCR technology for units 1 and 2 at Jim Bridger in the 2017 IRP	11
2019	Shoshone Falls	On-line date for smaller upgrade during first quarter	12

#### VI. RESPONSE TO ORDER NO. 32980

20. In Order No. 32980, the Commission accepted the Company's 2013 IRP. In so doing, the Commission stated on page 16 several expectations for Idaho Power going forward. First, the Commission expected the Company to monitor developments at the national level and to account for their impact in its resource planning. As discussed in Chapter 9 and in Appendix C—Technical Appendix, Idaho Power's 2015 IRP incorporates the cost and long-term effects of carbon regulation by modeling several scenarios based on the EPA's proposed CAA Section 111(d) regulations and the impact they would have on the Company's operations. Although the optimization of

coal unit shutdown alternatives using computer modeling tools will not be possible until the proposed CAA Section 111(d) regulation is finalized sometime in the second half of 2015, trends in the modeling results indicate a portfolio with an earlier North Valmy unit shutdown coupled with the completion of the B2H project, which performs well on a 20-year net present value basis.

- 21. Second, the Commission expected Idaho Power "to collaborate with stakeholders on how best to use energy efficiency as a resource." Order No. 32980 at 16. In December 2014, Idaho Power organized the Energy Efficiency Working Group inviting members of the IRPAC, the EEAG, and public participants in the IRP process. The Company then hosted two meetings with this working group, as described on pages 47-48 of the IRP. As a result of the meetings, the Company committed to continue investigating the extent to which transmission and/or distribution benefits result from energy efficiency measures and programs, as well as the approximate value of such benefits. Idaho Power presented a status update of this ongoing investigation at the May 7, 2015, IRPAC meeting. Actions to be taken as part of the ongoing study include a review of transmission and distribution investments related to growth, an evaluation of the effectiveness of energy efficiency measures and programs in deferring transmission and distribution investment, and an estimate of the deferral value for those instances with the potential for transmission and/or distribution investment deferment.
- 22. Idaho Power is also committed to continuing discussing the energy efficiency and demand response program delivery issues identified by Commission Staff and by some intervenors in comments filed in Case No. IPC-E-14-04. Because the IRP process does not address program delivery issues, the Company plans to use the EEAG as the forum to provide customers, regulatory staff, and other interested

stakeholders an opportunity to provide advice and recommendations to Idaho Power on formulating, implementing, and evaluating energy efficiency and demand response programs and activities.

23. The Commission also indicated that Idaho Power should be actively involved in matters relating to the North Valmy power plant and "to promptly apprise us of developments that could impact the Company's continued reliance on that coal-fired resource." Order No. 32980 at 16. Although no agreement has been reached to date, Idaho Power has been in discussions with the joint owner of the North Valmy plant regarding the future of that plant. As explained on pages 83-84 of the 2015 IRP, Idaho Power seeks to balance the impacts of carbon regulation with the economic impact to customers, as well as customer needs for reliable service. Cost and risk will continue to be important factors in the utilities' discussions and decision processes.

#### VII. COMMUNICATIONS AND SERVICE OF PLEADINGS

24. Idaho Power requests that any notices, inquiries, and communications regarding this request be provided to:

> Lisa D. Nordstrom Regulatory Dockets Idaho Power Company P.O. Box 70

Boise, Idaho 83707

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#### **VIII. REQUEST FOR ACCEPTANCE**

25. Idaho Power respectfully requests that the Commission issue its order accepting the Company's 2015 IRP and finding that the 2015 IRP meets both the procedural and substantive requirements of Commission Order No. 22299.

### DATED at Boise, Idaho, this 30<sup>th</sup> day of June 2015.

LISA D. NORDSTROM
Attorney for Idaho Power Company

# BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION CASE NO. IPC-E-15-19

**IDAHO POWER COMPANY** 

## ATTACHMENT 1 2015 INTEGRATED RESOURCE PLAN